

REMARKS

This reply encompasses a bona fide attempt to address the rejections raised by the Examiner and presents amendments as well as reasons why the applicants believe that the claimed invention is novel and unobvious over the closest prior art of record, thereby placing the present application in a condition for allowance.

Regarding Claim Status

Claims 1-4, 6-11 and 13-19 were examined. Claims 1-4, 6-11 and 13-19 were rejected. Claims 1-4, 6-11 and 13-19 are pending.

Regarding 35 U.S.C. § 102 Rejections

Claims 1-4 and 6-8 were rejected under 35 U.S.C. § 102(e) as being anticipated by Parker (US Patent 6,674,894). In the Examiner's rejection, he states that adjacent points are equivalent to boundary pairs. He further elaborates, on page 8 of the Office Action, that since boundary pairs are described to both lie on the same line, they are adjacent. Applicants respectfully submit that this is not the case.

Boundary pairs, as described by applicants, are two points that together define the boundary of a vessel. As an analogy, boundary pairs can be thought of as two points that together define the boundary of the United States, for example New York and San Francisco. A line can be drawn between New York and San Francisco, but these cities are not adjacent cities. Similarly, boundary pairs are, by definition, not adjacent points as they are defined in claim 1 to be at least two voxels apart.

In contrast, Parker refers to adjacent, i.e. neighboring points. He compares adjacent points to determine spatial similarities, and groups points based on these similarities (see column 4, lines 36-50). He also uses adjacent points to “fill out” vessels (see column 11, lines 28-37). In our geography example, this would be the equivalent of analyzing, for example, the population density in New York and a neighboring city, such as Union City. This example was discussed in a telephonic interview between Miriam Kaplan, Ron Jacobs, Examiner Broome, and Examiner Nguyen on August 10, 2006, 2:30 pm EST. As Parker does not teach boundary pairs, it is respectfully submitted that claims 1-4 and 6-8 are novel over Parker and therefore should be allowed.

Regarding 35 U.S.C. § 103 Rejections

Claims 9-11 and 13-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Parker in view of Frangi (Model-based Quantitation of 3-D Magnetic Resonance Angiographic Images, 1999). This rejection is based on the assumption that Parker teaches boundary pairs. As Applicants respectfully submit that Parker does not teach boundary pairs, as described above, it is respectfully submitted that claims 9-11 and 13-19 are not obvious from the combination of Parker and Frangi and therefore should be allowed.

Regarding Examiner's Response to Arguments

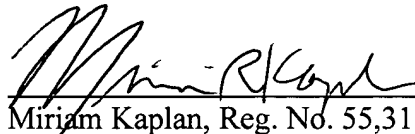
As described above, Applicants respectfully submit that Parker teaches adjacent points, not boundary pairs.

Conclusion

For the foregoing reasons, it is respectfully submitted that the invention as set forth in independent claims 1 and 9 recites subject matter that is novel, under 35 U.S.C. § 102(e), from Parker and that is patentably distinct, under 35 U.S.C. § 103(a), from Parker and Frangi. Accordingly, claims 1 and 9 are submitted to be patentable and therefore should be allowed. Claims 2-4, 6-8, 10-11, and 13-17 are submitted to be patentable as they are dependent on independent claims 1 and 9.

This Reply is submitted to be complete and proper in that it places the present application in a condition for allowance without adding new matter. Favorable consideration and a Notice of Allowance of all pending claims 1-4, 6-11 and 13-19 are therefore respectfully solicited.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Miriam Kaplan", is written over a horizontal line.

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